



September

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Intelligent Transportation Systems Not New Thinking, Just Better Linking

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I attended the ninth annual meeting of the Intelligent Transportation Society of America in Washington, D.C. in April. It was a large conference with more than one hundred technical sessions and international participation by transportation system specialists and leaders. The theme of the conference was "New Thinking in Transportation", but the more I learned about Intelligent Transportation Systems (ITS), the more the conference and seminars convinced me that it is not really new thinking. ITS is just better linking between three familiar components.



An applicator dispenses black magnetic tape on a milled asphalt concrete surface. New asphalt concrete will cover the tape in this underlay process. Magnetic tape can also be applied as an inlay or overlay depending upon the climate and type of roadway.

The first component is technology. The range of available technology was evident in the overwhelming three hundred fifty product information booths at the conference. We can apply technology to the roadway. For example, magnetic lateral warning and guidance tape built into the roadway can help vehicles traverse the roadway in extreme weather conditions. We can build technology into the automobile. For example, global positioning and many other navigation systems are available for personal and emergency vehicles. We can also use technology to assist with traffic management involving everything from complex traffic command center software to sensitive surveillance and data collection equipment.



Federal Highway Administration



From the customer's point of view, the technology is out there. The daunting challenge is keeping abreast of the advancing technology and selecting the right technological tool for the job.

The second component is coordination. Many ITS presentations focused on the vital need for coordination between Federal and State agencies as well as local counties and communities to make transportation projects successful. Seminar speakers stressed that what serves the traveling public best is a seamless and smooth system that flows across jurisdictional boundaries. Coordination and overcoming of "turf" are evidently some of the biggest hurdles. Through the ITS presentations, I also learned that a National ITS Architecture exists. The National ITS Architecture is a framework developed to coordinate technology components and to ensure developing systems can be integrated. The main concept was that transportation systems should be coordinated and designed in regional and national context.



Personnel at a traffic command center monitor all major roadways and freeways in their area. Besides responding to various incidents, traffic command centers can also control signals, variable message signs, and ramp metering.

The third component is communication. Gathering and dissemination of accurate information is a pivotal component of ITS. Throughout the conference, the seminar speakers highlighted cases illustrating how improved communication assists decision-making. For example,



Surveillance equipment provides live-action pictures to the traffic command center and local television channels. More than 5,000 systems worldwide provide accurate, reliable, and cost-effective surveillance of critical travel-ways.

California is employing variable message sign panels prior to selected locations on State routes. Warning messages flash when triggered by a vehicle approaching these locations in excess of the posted speed limit. In Virginia and many other States, cameras, sensors, and other integrated systems continually monitor critical travel-ways providing communication of vital information to traffic command centers. This information is available to the traveler before leaving their residence or location via web pages and phones.



Variable message sign panels notify or warn travelers of their current speed.

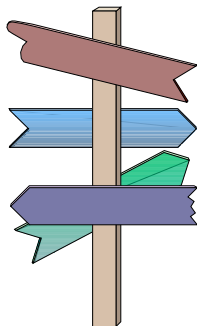
Also, maintenance crews can receive early notification of hazardous conditions developing on the roadway via pavement and ambient air sensors. It is also possible that global positioning systems (GPS) can be used to monitor vehicle travel to tailor auto insurance coverage and charges based on this GPS information.



A wireless integrated system provides data to the traffic command center. Real-time images show traffic conditions while sensors measure and report various weather conditions at desired intervals .

This conference was my introduction to the ITS arena. What I learned is that ITS is the *coordinated* use of *technology* to *communicate* information and increase the safety and efficiency of the transportation network. The ideas taken individually are not new. What is new is the power harnessed when transportation specialists successfully link these components together.

ROAD SIGNS



"There's no fool like an old fool -- you can't beat experience."

--Jacob Braude

March 1999 Questionnaire results

We wish to thank everyone for their time and thoughtful comments in responding to the TD Questionnaire. We had an overwhelming response to continue receiving a printed copy of the TD News. As a result, we shall continue to circulate the printed copies. We always welcome comments and suggestions from our audience to help us continuously improve the TD News publications.

–TD Team

We wish to thank all the individuals who have contributed articles for previous newsletters. If you are aware of a new technology, (or a fresh spin on an old one) please jot down your ideas and submit them via e-mail to me at the address below. Or, if you have an aversion to writing, just donate 15 minutes of your time for an interview (either by phone or in person), and I'll format the information for you. You can then review the article for accuracy (via e-mail or hard copy) and upon publication, you'll become famous in a matter of days. Remember, although we cater to road-related technology, ANY new technology information is welcome.

Please send all submissions to Kristi Swisher - (360.696.7572). Be sure, your name, title, and phone number are the way you want them to appear in the article. Articles are subject to editor/ layout approval and may be condensed if space is limited.

For your convenience, all issues of the WFLHD Technology Development News are also available for viewing and downloading from the WFLHD Technology Development web page. We invite you to broaden your understanding of the WFLHD Technology Development Program.

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